TEXAS WATER COMMISSION

UIC

DISPOSAL WELL INSPECTION CHECKLIST

Permit # WDW 49 Inspection Date(s) March 31, April 15, 93

TWC Inspector(s) Nadia Hameed (Print) District 07

Permittee Name Hoechst Celanese Company Well # 4

Inspection Type: (Regular) Follow up
Facility Type: Commercial (Non-commercial)

Company Reps/Guides	Title	Phone
Kaynartha Williams	Environmental Engineer	409-241-4123

Section 1 PRE-INJECTION FACILITIES

1. Are facilities managing hazardous wastes? Interim Status tanks waiting for an exemption as a totally enclosed treatment system. Yes (No) NA
2. Facilities covered under RCRA Permit? Yes (No) NA
3. Are facilities exempted from permitting requirements? Yes (No) NA
4. Description of preinjection facilities Preinjection facilities consist of; Storage vessel V-680, two neutralization vessels 1216 and 1217 Primary Filters V-1061 V-1062 V-1059 and V-1060 Polishing Filters V-162 V-163 V-656, V-657, V-758 and V-757 and surge vessel 159
5. Evidence of leaks or spills? (If yes, note in comments) Yes (No) NA
6. In the permit for this facility, are the 31 TAC Chapter 331 rules incorporated by reference? (Yes) No

Note to the inspector: If the answer to the above question is "No", then only the provisions specifically stated in the permit are required to be met. In these cases any reference for a potential violation must cite the permit provision, not the rules.

Section 2 UIC FACILITIES

	COMPLIANT?
1. Is a legible sign with company name, company well number and TWC permit number posted at the well site? *TAC 331.66(a)(1)*	(Yes) No NA
2. Is an all weather road to the well installed and maintained? *TAC 331.66(a)(2)*	(Yes) No NA
3. Is wellhead painted (if appropriate), maintained in good working order, without leaks? *TAC 331.66(a)(3)*	(Yes) No NA
4. Whenever the well is operating, are trained staff on location and able to operate the well and respond to alarms? *TAC 331.64(c)(2)*	(Yes) No NA

SEP 20 1993

Note: All noncompliances must include comments.

(Revised 10/1/91)

ADDENDUM I

TEXAS WATER COMMISSION

January 20, 1987

Celanese Chemical Company
P.O. Box 509
Bay City, Texas 77414

RE: Amendment to Permit No. WDW-49

Dear Sirs:

Enclosed is a copy of the referenced permit issued pursuant to your application and Chapter 26 of the Texas Water Code. The permit constitutes an official document which should be kept in your permanent records.

Please continue using the self-reporting forms you have on hand until new forms are forwarded by the Water Quality Division.

Should you have any questions, please contact us.

Very truly yours,

TEXAS WATER COMMISSION

By Mary Ann Hefner
Mary Ann Hefner
Chief Clerk

MAH:lm
Enclosures
cc w/enclosure:
TWC District No. 12
Plant Manager, Celanese Chemical Company

1930005

PERMIT NO. WDW-49

This permit supersedes and replaces TWC Permit No. WDW-49 issued April 8, 1969 and amended September 15, 1972.

TEXAS WATER COMMISSION
Stephen F. Austin State Office Building
Austin, Texas

PERMIT to conduct underground injection under provisions of Chapter 26 & 27, Texas Water Code (for hazardous waste disposal wells) and Article 4477-7, Texas Solid Waste Disposal Act

I. Name of Permittee:

A. Name Celanese Chemical Company

B. Address P. O. Box 509
Bay City, Texas 77414

II. Type of Permit: Regular _____ Amended X

III. Nature of Business: Petro-chemical Plant

IV. General Description and Location of Injection Activity

The injection well will be used to dispose of industrial waste from the Bay City Plant. The well is located 3489 feet north and 2442 feet east of the southwest corner of the company property which is located on the James Moore League,

CONTINUED on Pages 2 through 8.

The permittee is authorized to conduct injection activity in accordance with limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules and orders of the Commission, and the laws of the State of Texas. This permit is valid for a period of 10 years or until amended or revoked by the Commission.

APPROVED, ISSUED AND EFFECTIVE this 13th day of January, 1987.

ATTEST: Mary Ann Hefner

Paul Hopkins
For the Commission

TDWR-0076C

Abstract No. 62, Matagorda County, Texas, approximately 10 miles southwest of Bay City, Texas; 28°21'24" North latitude, 96°00'59" West longitude. Injection will be into the Miocene sands in the approximate subsurface interval between 3300 and 3700 feet.

V. Construction Requirements

A permit for the drilling and operation of this disposal well was issued on April 8, 1969. The permittee set and cemented surface casing to a subsurface depth of 1389 feet, and long-string casing from the surface into the injection zone to 3162 feet to properly protect usable quality ground water. Cementing was by the pump and plug method. Cement was circulated outside both casings back to the surface. Except as specifically required in terms of the original permit, construction of the well and the associated facilities was done in accordance with the plans and specifications contained in the permit application. Any proposed changes to the plans and specifications must be certified in writing by the Executive Director that said changes provide equivalent or greater protection than the original design criteria and standards. Any change in well operational parameters will require a permit amendment as specified in 31 TAC Section 305.62.

VI. Character of the Waste Streams

A. Industrial waste permitted to be injected shall consist of the following waste streams; however, wastes not authorized to be stored, processed or handled in associated solid waste surface facilities are expressly not authorized.

1. Wastes generated during closure of the well and associated facilities that are compatible with permitted wastes and the reservoir.

2. Wastes associated with the production of Acetaldehyde, Vinyl Acetate, n-Butyl Alcohol, n-Propyl Alcohol, Iso-Butyl Alcohol, Heptanoic Acid, Nonanoic Acid, Hydrogen Synthesis Gas, C_7 and C_9 Aldehydes, Propionic Acid, and Fatty Alcohols.

3. Contaminated rainfall runoff, slab wash water, contaminated products, contaminated raw materials, tank car heels, and spillage and wash water from tank car-tank truck cleaning and loading areas.

E. The pH and density of the injected waste shall be monitored continuously or on a batch basis or by grab sample once every 8 hours. Annulus volumes shall be monitored a minimum once each work shift.

F. Mechanical integrity was demonstrated on November 30, 1983 and shall be demonstrated thereafter once every five years for the life of the well.

IX. Reporting Requirements

A. The permittee shall submit to the Commission within twenty (20) days after the last day of March, June, September and December of each year a Report of Injection Operation on forms supplied by the Commission.

B. The permittee shall submit to the Commission annually, with the December operating report, an acceptable report of the pressure effects of the well upon its injection zone, including a direct measurement of bottom-hole pressure, or a calculation of bottom-hole pressure using the specific gravity of fluid in the wellbore and the static fluid level. To the extent such information is reasonably available, the report shall also include:

1. Locations of newly constructed and discovered wells within the Area of Review if such wells were not included in the Technical Report accompanying the permit application or in later reports.

2. A tabulation of data for all newly constructed and discovered wells within 1/2 mile of the injection well and for all such wells within the Area of Review that penetrate to within 300 feet of the top of the injection zone as required by 31 TAC Section 331.65(b) (2) (B).

3. Annual injection fluid analysis.

C. The permittee shall notify the Austin Office of the Commission within twenty-four (24) hours of any change in monitoring parameters or of any other observations which could reasonably be attributed to a leak or other failure in well equipment.

D. The permittee shall submit to the Commission within forty-five (45) days after completion of the following tests a report including both data and interpretation of the results of:

1. Periodic tests of mechanical integrity; and

2. Any other test of the injection well or injection zone if required by the Executive Director.

X. Well Workovers

A. The permittee shall notify the Austin Office of the Commission of any workover or corrective maintenance operation:

1. For major workovers or corrective maintenance operations which involve removal of injection tubing the permittee shall obtain approval of the Executive Director prior to beginning work. Notification shall be in writing and shall include plans for the proposed work. The Executive Director may grant an exception to prior written notification when immediate action is required.

2. For other workovers or corrective maintenance operations the permittee shall notify the Austin Office of the Commission and obtain approval before beginning work.

B. Within sixty (60) days after completion of any workover, a completion report shall be submitted to the Commission including the reason for the well workover and details of the work performed.

C. During major workovers, the bottom-hole pressure shall be determined either by direct measurement using conventional techniques or by calculation using specific gravity of fluid in the wellbore and the static fluid level.

D. All phases of any workover shall be supervised by a person knowledgeable and experienced in practical well engineering, who is familiar with the special conditions and requirements of injection well construction and operation.

E. Mechanical integrity shall be demonstrated following major workovers or corrective maintenance operations which involve removal of injection tubing or perforating.

XI. Plugging

A. Upon final abandonment the well shall be plugged in accordance with plans and specifications contained in the

application after mechanical integrity of the well is verified by a program approved by the Executive Director. Any proposed changes to plans and specifications must be certified in writing by the Executive Director that said changes provide protection equivalent to or greater than the original design criteria and standards.

B. The permittee shall notify the Austin Office of the Commission in writing thirty (30) days prior to commencing plugging operations. Within thirty (30) days of completion of plugging operations the permittee shall submit to the Austin Office of the Commission a plugging report on forms provided by the Commission.

C. The permittee shall secure and maintain in full force and effect at all times a performance bond or other form of financial security, in accordance with 31 TAC Section 305.153 (relating to Financial Responsibility), to provide for proper plugging and abandonment of the permitted waste disposal well. The bond or other form of financial security shall be in the amount of $79.000.00. The amount of financial security may, at the discretion of the Texas Water Commission, be altered at a future date to provide for adequate plugging subject to prevailing general economic conditions, as provided by 31 TAC Section 305.62 (pertaining to the amendment of permits). The injection of fluids is not authorized until the permittee secures the performance bond or other form of financial security as described above.

XII. Monitoring and Record Keeping

A. The permittee shall keep complete and accurate records of:

1. All monitoring required in the permit, including:

   a. Continuous records of surface injection pressures,
   b. Continuous records of the tubing-long string annulus pressures,
   c. Continuous records of injection flow rates,
   d. Monthly total volume of injected fluids,
   e. Annulus volume,
   f. Injection fluid pH,
   g. Injection fluid density,

2. All periodic well tests, including but not limited to:

a. Injection fluid analysis,
b. Bottom-hole pressure readings,
c. Mechanical integrity.

3. All shut-in periods and times that emergency measures were used for handling waste; and

4. Any additional information on conditions that might reasonably affect the operation of the injection well.

B. All records shall be made available for review upon request from a representative of the Commission.

C. The permittee shall retain, for a period of five (5) years following abandonment, records of all information resulting from any monitoring activities or records required by this permit.

XIV. Other Requirements

A. A sign shall be posted at the well site which shall show the name of the company, company well number and permit number. The sign and identification shall be in the English language, clearly legible and shall be in numbers and letters at least one (1) inch high.

B. An all-weather road shall be installed and maintained to allow access to the disposal well and related facilities.

C. The wellhead and associated facilities shall be painted, where appropriate, and maintained in good working order without leaks.

D. The following rules are incorporated in this permit by reference:

Permit Characteristics and Conditions,
31 TAC Subchapter F, Sections 305.121-128
Additional Conditions for Injection Well Permits,
31 TAC Subchapter H, Sections 305.151-160

E. No discharge of wastes, other than those waste streams specified in Paragraph VI of this permit injected into Miocene Sands in the subsurface between approximately 3300 and 3700 feet is authorized by this permit from this facility into water in the State.

F. Within thirty (30) days after permit approval, the permittee shall provide written notice to the Executive Director that a copy of the permit has been filed with the health and pollution control authorities of the county, city or town where the well is located.

G. All solid waste managed at the facility shall be managed in accordance with 31 TAC Chapter 335, Rules for Industrial Solid Waste and Municipal Hazardous Waste.

H. The permittee is subject to the provisions of 31 TAC 305.125.

Compliance Summary
WDW-14, 32, 49, and 110

Celanese Chemical Co., Inc. has operated waste disposal wells at their Bay City facility since 1964. Their present wells were issued permits on September 28, 1964 for WDW-14, July 3, 1967 for WDW-32, April 8, 1969 for WDW-49 and March 27, 1973 for WDW-110. Annual inspections and self reporting through the years have generally revealed a compliant operation with only an occasional problem with instrument calibration, chart inking, or inadequate annulus pressure. One serious mechanical integrity problem which developed with WDW-110 in 1984 resulted in a compliance agreement with Celanese so that the problem could be resolved as expeditiously as possible. The terms of the agreement were achieved in a timely manner. Celanese is viewed overall to have a compliant, conscientious operation.

Joseph L. Peters 8/20/86

Joseph L. Peters, Hydrologist
Ground Water Conservation Section

1930200

TEXAS WATER COMMISSION Page 1 of 1

DISPOSAL WELL INSPECTION CHECKLIST

Permit # WDW 32, 49, + 110 Inspection Date(s) March 31, April 15,

Section 6 EPA NO-MIGRATION PETITION APPROVAL CONDITIONS

1. Is the operator disposing of more waste volume than is allowed in the petition conditions ? YES (NO)

   Petition Value 26,784,000 gal

   Observed Value 7,231,700 gal Time Period August

2. Is the operator's waste stream complying with the specific gravity or density conditions of the petition ? (YES) NO

   Petition Value or Range 1.00 to 1.10

   Observed Value or Range 1.0045 Date(s) April 15, 93

3. Is the operator disposing of any hazardous waste that has a waste code that is not included in the petition condition list of approved waste codes ? YES (NO)

   List wastes being disposed that aren't on the approved list:

   _____

   _____

   _____

Comments:

_____

_____

_____

_____

_____

_____

_____

_____

Note: If the answer to any of the above questions is the bolded answer, this means that the operator may be out of compliance with the EPA approved no-migration petition and the EPA needs to be notified of this situation as soon as possible.

1930200014

TEXAS WATER COMMISSION

PROTECTING TEXANS' HEALTH AND SAFETY BY PREVENTING AND REDUCING POLLUTION

May 14, 1993

Ms. Kaymartha Williams
Environmental Engineer
Hoechst Celanese Chemical Group
P.O. Box 509
Bay City, TX 77404

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RE: Hoechst Celanese, S. W. Registration No. 30134
WDW-14, WDW-32, WDW-49, WDW-110
EPA ID No. TXD026040709
Underground Injection Control Violations

Dear Ms. Williams:

On March 31 and April 15, 1993, a representative of the Texas Water Commission (TWC) District 7 office conducted an inspection of the above referenced facility. The inspection was conducted to determine the facility's compliance with the commission's rules pertaining to Underground Injection Control (UIC). During the inspection, conditions were observed and documented that we believe constitute a violation of the UIC rules. The following area of alleged violation was observed.

Permit Provision VIII.E. - Operating Parameters

The pH and density of the injected waste shall be monitored continuously or on a batch basis or by grab sample once every 8 hours. Annulus volumes shall be monitored a minimum once each work shift.

- It was noted in the inspection that the facility was measuring the fluid density once every 12 hours (i.e once per shift) for the wells above.

Concerning this alleged violation, we request your response in writing with a schedule for corrective action by June 14, 1993. We also request that you advise us of any corrective action which you have already taken.

An on-site inspection or review of records will be conducted at the appropriate time to verify compliance. Failure to respond within the requested time frame and to adequately remedy UIC violations may result in the initiation of formal enforcement action which could lead

to administrative penalties of up to $10,000 per day assessed against the company by the Texas Water Commission.

A copy of the 31 TAC Chapter 331 regulations can be obtained for a fee from Agency Information Consultants, Inc., P. O. Box 2181, Austin, Texas 78768, telephone number 512/478-8991 or from Research and Planning Consultants, 3200 Red River St., Suite 302, Austin, TX 78705, telephone number 512/327-0009. The Code of Federal Regulations (40 CFR Parts 260-299) is available from the U. S. Government Printing Office, Texas Crude Building, 801 Travis Street, Houston, TX 77002, telephone number 713/228-1187 or from the U.S. Government Printing Office, Room 1C-50, Federal Building, 1100 Commerce Street, Dallas, TX 75242, telephone number 214/767-0076.

If you have any questions regarding these matters, please contact Ms. Nadia Hameed of the District 7 Office at telephone number 713/457-5191.

Sincerely,

for Susan D. Bredehoeft
Program Manager
Industrial & Hazardous Waste Program
District 7 - Houston

SDB/NH/tl

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TEXAS WATER COMMISSION

PROTECTING TEXANS' HEALTH AND SAFETY BY PREVENTING AND REDUCING POLLUTION

May 14, 1993

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Environmental Engineer
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Sincerely,

for Billie Zapalac

Susan D. Bredehoeft
Program Manager
Industrial & Hazardous Waste Program
District 7 - Houston

SDB/NH/tl

19530

Texas Water Commission

INTEROFFICE MEMORANDUM

To: FILE Date: May 14, 1993

Thru: Ben Wesley, UIC Coordinator, Program Services Unit
Field Operations Division

From: Nadia Hameed, Field Investigator
District 7 - Houston

Subject: Hoechst Celanese - Permit No. WDW-32, WDW-49 and WDW-110
TWC Registration No. 30134
Underground Injection Control Inspection
Conducted March 31 and April 15, 1993

1963020017

I. INTRODUCTION

On March 31 and April 15, 1992, Nadia Hameed of the Texas Water Commission (TWC) District 7 office conducted an Underground Injection Control (UIC) inspection at the above referenced facility. Participating in the inspection on behalf of Hoechst Celanese was Kaymartha Williams.

II. WASTES GENERATED

The facility has three injection wells (WDW-110, WDW-32, WDW-49) for the disposal of non-hazardous wastewaters. The waste being deep well injected in these wells consists mainly of non-hazardous wastewaters including tank car wash effluent. The wastewaters and other non-hazardous waste is routed through the oil/water separators to a non-hazardous storage tank #680. From tank #680 the waste is sent to two neutralization vessels 1216 and 1217 to be pH adjusted.

III. WASTE MANAGEMENT FACILITIES

Once the pH has been adjusted the waste is put through primary filters V-1061, V-1062, V-1059 and V-1060 and then through polishing filters V-162, V-163, V-656, V-657, V-758 and V-757. It is then sent into surge vessel V-159 prior to being sent to one of the three non-hazardous deep wells for injection.

The pH is continuously monitored by pH meters and the permit requires that the fluid density be checked at least once every 8 hours.

Workover has just been completed on WDW-110 where the Lower Miocene injection interval that was used to receive hazardous waste has just been closed. As a result WDW-110 will no longer be used for hazardous waste injection.

IV. VIOLATION

- The facility is required by the Permit Provision VIII. E. to measure the fluid density every 8 hours. It was noted in the inspection that the facility was measuring the fluid density once every 12 hours (i.e once per shift) for all of the wells above.

This information is submitted as file data.

Signed: N. Hameed

Nadia Hameed
Field Investigator

Approved: for Susan Zapata

Susan D. Bredehoeft
Program Manager
Industrial and Hazardous Waste Program
District 7 - Houston

SDB/NH/tl